

Wii U

Application Configuration Tool Manual

2015/08/19

Version 1.12

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and should be handled accordingly.**

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1 Introduction

This document describes how to use the Wii U Application Configuration Tool.

Note: This document only describes the basic operations of the tool. For detailed descriptions of items that can be configured in the Application Configuration Tool and how they affect application behavior, be sure to see the separately released document, *Wii U Master ROM Creation and Submission Procedures*.

1.1 Overview

The Application Configuration Tool has three main features.

- Configure and export application setting files (`app.xml`, `cos.xml`, `meta.xml`, and `masterinfo.xml`)
- Configure and export disc layout settings and disc layout setting files (`*.ddf`)
- Convert the application's image and e-manual files into appropriate formats for master ROM submission

1.2 Running the Program

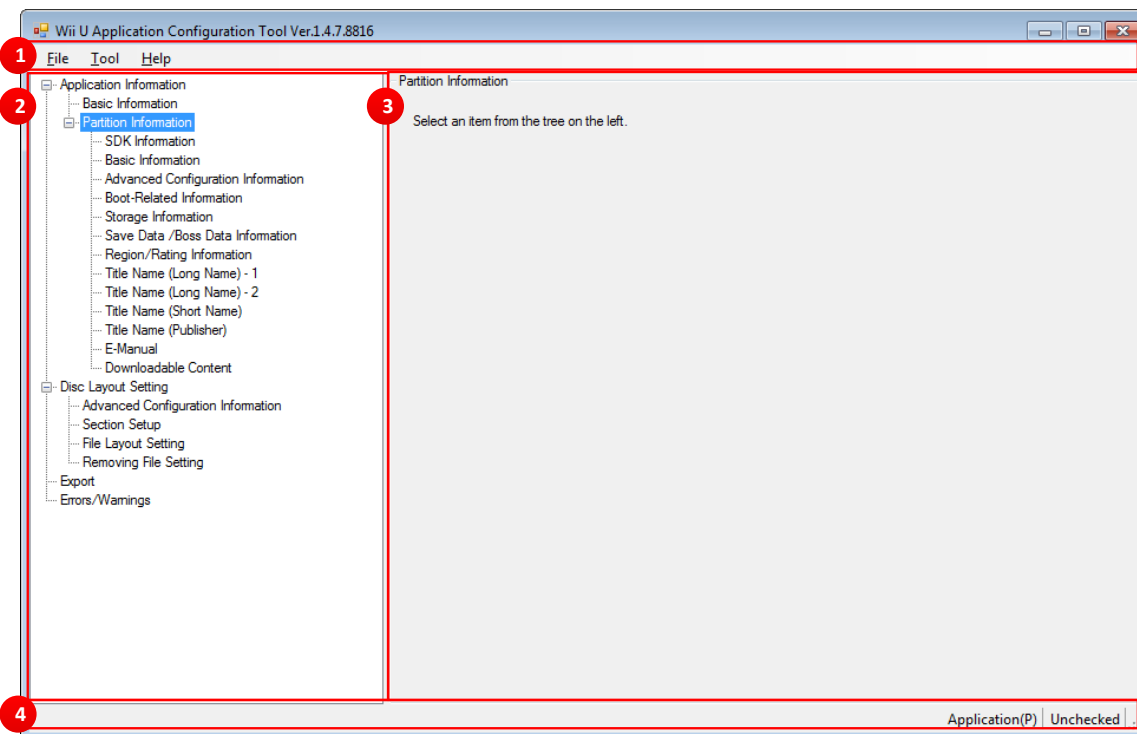
Run the `bin/appconfig.exe` file included in the package.

See Chapter 4 Command Line Mode for instructions on running the tool from the command line.

1.3 Structure

When you run `appconfig.exe`, the following window appears.

Figure 1-1 Overview of Application Configuration Tool



Use the menu bar (1) in the figure to import or export settings, create and validate file content, or convert images. See Chapter 2 Basic Operations for details.

The list in the left frame of the figure (2) divides the settings by category.

The window area (3) in the figure displays the settings for the category selected in the list. See Chapter 3 Using the Setting Pages for details.

The status bar (4) in the figure displays the type of save data being edited. It also shows whether the entered content has been checked.

2 Basic Operations

This chapter describes the features provided by the Application Configuration Tool menus (item ① in Figure 1-1).

2.1 The File Menu

Use the **File (F)** menu to create, import, or export the application setup files (XML format). Table 2-1 describes each of these features.

Table 2-1 File Operations

Menu Item	Description
Create New	Creates a new setup file. There are three types of setup files: one for application development, one for add-on/downloadable content, and one for retail interactive display (kiosk) demos. The application-development format is created by default. Select Save Data File for Application Development when creating an application or patch, Save Data File for Downloadable Content when creating downloadable content, and Save Data File for Kiosk Demo when creating a demo for retail interactive displays.
Open	Opens a previously saved XML setup file. If you have saved the file with an extension other than <code>.xml</code> , select "All Files" from the drop-down menu. The current version of the Application Configuration Tool is able to load setup files generated with version 1.0.1 and later versions of the tool and convert them while maintaining compatibility. Run Validate to view a list of changes after the conversion.
Save	Saves the current settings as an XML file. The default filename is <code>appconfig.xml</code> (this is separate from the <code>appspecific.xml</code> file included with the package).
Save As	
Export	Exports the following files needed for application mastering and master ROM submission. See Section 3.3.1 Output Directory for instructions on specifying the export destination. <code>app.xml</code> <code>cos.xml</code> <code>meta.xml</code> <code>masterinfo.xml</code> Disc Layout Setup File (*.ddf)
Exit	Exits the program. You can also exit by clicking the standard Windows Exit button in the top right of the window.

Note: To reflect your settings within the Application Configuration Tool in your mastered application (created using `makecfmaster`), you must use the export feature to generate all setup files.

Note: These settings will not be reflected if you only choose the **Save** or **Save As** command.

2.2 The Tool Menu

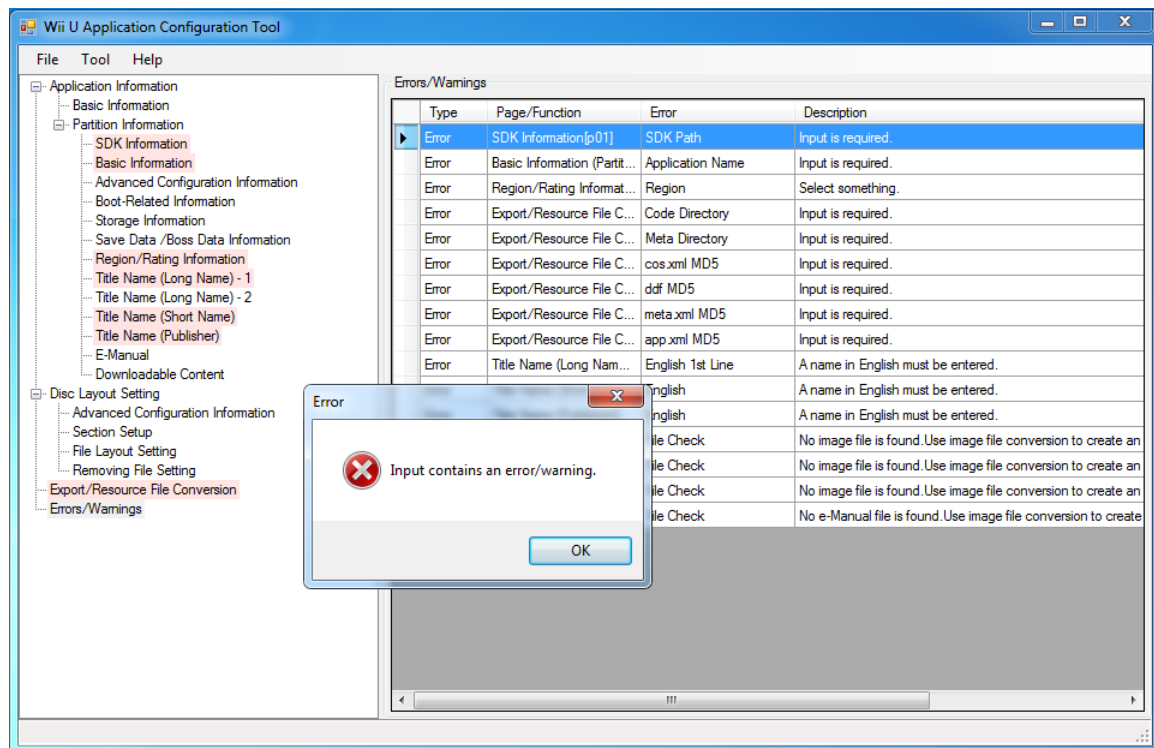
The **Tool** menu offers the following features. This section describes each of these features.

- Validate
- Convert Image File (P)
- Save Data Format Conversion
- Generate appspecific.xml
- Settings

2.2.1 Validate

This feature validates all settings entered in the Application Configuration Tool and outputs any errors. If the validation completes and finds any errors or warnings, a dialog box appears, and the application navigates to the **Errors/Warnings** category. To help pinpoint issues, any category that contains items with errors or warnings will be highlighted in light red or yellow (see Figure 2-1 below). See Section 3.4 Errors/Warnings for details about the **Errors/Warnings** category.

Figure 2-1 Errors Displayed After Validation



2.2.2 Convert Image File (P)

This feature converts the header information so that an image and sound used in the Launcher screen and while the application launches can be used for mastering. When converting, this feature also verifies that the source file to convert has the appropriate format. If the source file to convert does not comply with the specifications, the tool displays an error and cancels the conversion.

The tool exports converted files to the `meta` directory. See Section 3.3.1 Output Directory for instructions on specifying the output directory.

Table 2-2 shows details about each of the image conversion features.

Table 2-2 Convert Image Files

Menu Item	Description
Convert All Formats	Converts all target file types (the five types below) sequentially.
Icon Image (1)	Converts the icon image displayed in the Launcher before the application starts. The converted image is exported to the <code>meta</code> directory as <code>iconTex.tga</code> . The input file format is 32-bit TGA with alpha channel (RGBA).
Static Background Image for the Startup Screen (Application-Specific/TV) (2)	Converts the image displayed on the TV screen while the application is starting until the application starts rendering. The converted image is exported to the <code>meta</code> directory as <code>bootTvTex.tga</code> . The input file format is 24-bit TGA without alpha channel (RGB).
Static Background Image for the Startup Screen (Application-Specific/DRC) (3)	Converts the image displayed in the Wii U GamePad when the application starts. The converted image is exported to the <code>meta</code> directory as <code>bootDrcTex.tga</code> . The input file format is 24-bit TGA without alpha channel (RGB).
E-Manual (4)	Converts the e-manual used in the application, and exports it to the <code>meta</code> directory. See the documentation in the Wii U Manual Tools package for details about e-manuals.
Boot Sound (5)	Converts the boot sound data played when the application starts. The converted data is exported to the <code>meta</code> directory as <code>bootSound.bsnd</code> . Specify the output destination and loop offset (the position at which to start repeating the sound) at conversion. The input file format is WAV (little-endian).

Note: There are various restrictions for the source file used for conversion in addition to the file format, so be sure to read *Wii U Master ROM Creation and Submission Procedures*.

2.2.3 Save Data Format Conversion

This feature converts application save data into save data for Retail Interactive Demos (RIDs, also called "kiosks"). The save data currently open in the Application Configuration Tool can only be run if it is save data for normal applications. You must save the current data to a save data file before converting.

2.2.4 Generate appspecific.xml

This feature uses information from the GUI version to create the input content information XML file (`appspecific.xml`) used in the CUI version. This is an XML representation of the items that can be configured with the Application Configuration Tool (the CUI version). The values in `appspecific.xml` are based on the current settings.

For detailed information on the items and values that can be configured, see the `appspecific.format.xls` spreadsheet included in the package. The `appspecific.xml` file can only be generated from the GUI version; it cannot be used by it.

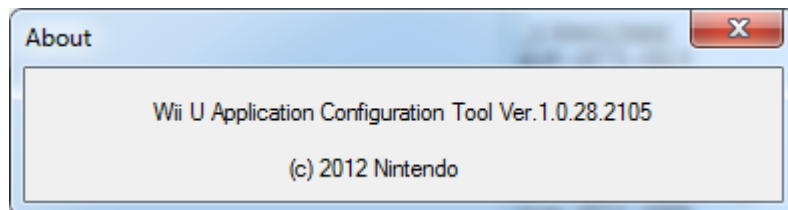
2.2.5 Settings

You can change the display language used in the Application Configuration Tool. There are three display language options: **Auto**, **English**, and **Japanese**. **Auto** sets the Application Configuration Tool display language based on the operating system language. Changes to the display language setting are reflected after the Application Configuration Tool is restarted.

2.3 The Help Menu

From the **Help** menu, select **Version Information** to view the version of the Application Configuration Tool.

Figure 2-2 Version Information About the Tool



3 Using the Setting Pages

This chapter describes how to use the setting page for each category listed in item 2 in Figure 1-1. Categories that do not require any explanation are omitted.

3.1 Application Information

This page does not require any particular explanation. See *Wii U Master ROM Creation and Submission Procedures* for details on entering application information.

3.2 Disc Layout Setting

3.2.1 Section Setup

Use the Section Setup page to divide the data for your application or add-on/downloadable content into several sections and configure their layout on disc.

The basic operations are as follows.

Figure 3-1 Disc Layout Setting: Section Setup

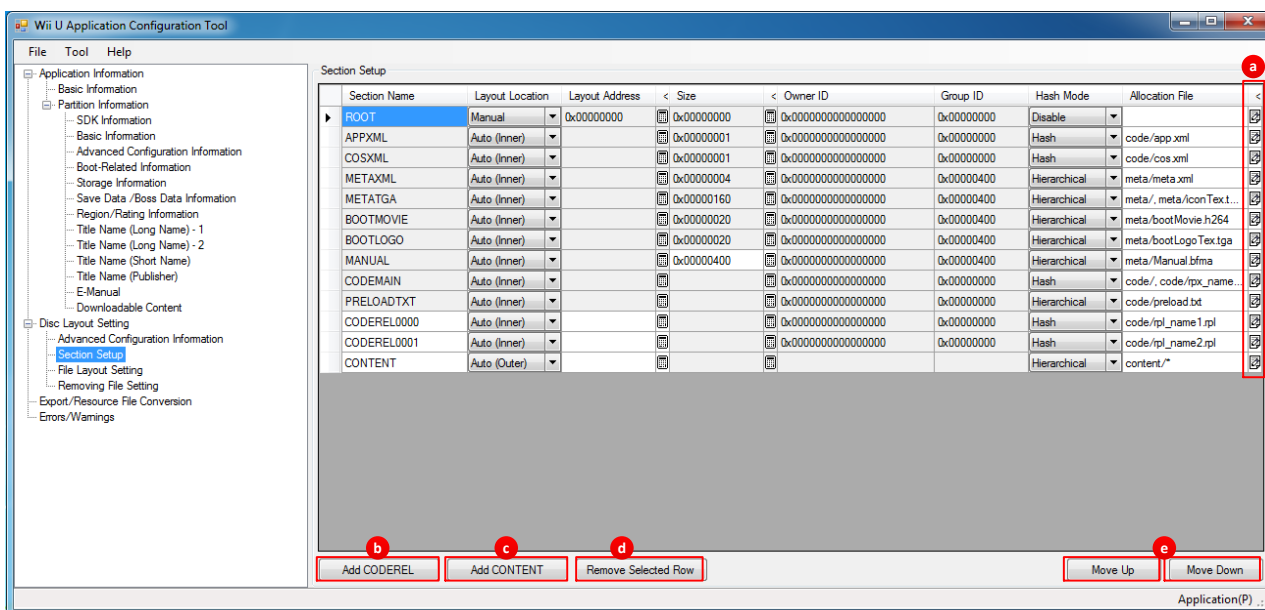


Table 3-1 Disc Layout Setting: Section Setup Buttons

Letter	Button	Description
a	Edit the Allocation File	Opens the Edit the Allocation File window. See Section 3.2.1.1 Editing the Allocation File List for details.
b	Add CODEREL	Adds an RPL (file) section name.
c	Add CONTENT	Adds a content section. A content section holds general data used by the application, such as texture or sound data.
d	Remove Selected Row	Deletes the selected row.
e	Move Up / Move Down	Moves the selected section up or down.

Note: With the default window size, you must scroll horizontally to see all of the items on the Section Setup page.

3.2.1.1 Editing the Allocation File List

When you click the file icon in the far right of the Section Setup grid (see (a) in Figure 3-1), the **Edit the Allocation File** dialog box appears.

The features are described below. You can use a wildcard character (*) when specifying the filename.

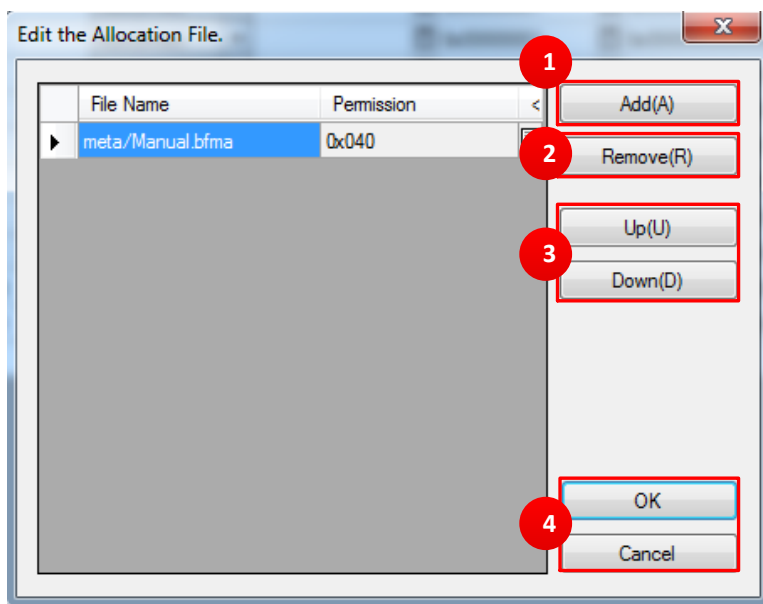
Figure 3-2 Edit the Allocation File

Table 3-2 Edit the Allocation File Dialog Box Parameters

Number	Parameter	Description
1	Add(A)	Adds a row for you to manually add a file or directory name.
2	Remove(R)	Removes a row.
3	Up(U)	Moves the selected row up or down.
	Down(D)	
4	OK	Closes the dialog box. Click OK to reflect your edits, and Cancel to close the dialog box without reflecting your edits.
	Cancel	

3.2.2 File Layout Setting

Under the **File Layout Setting** page, specify the layout of files in their specified sections on disc.

3.2.2.1 Batch Entry

Click the **Batch Entry** button to add and place all files in the specified folder to the **File Layout Setting** list.

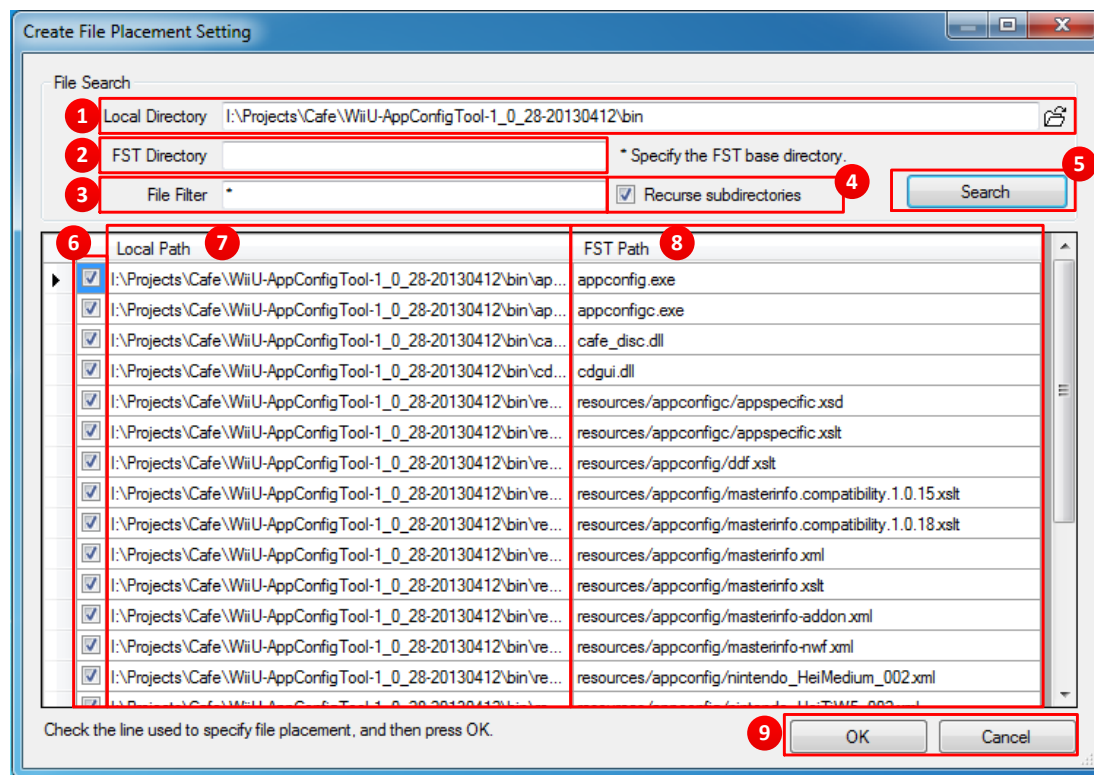
Figure 3-3 Batch Entry for the File Layout Setting

Table 3-3 File Layout Setting: Create File Placement Setting

Number	Setting	Description
1	Local Directory	Specify the path on the local PC to the targeted files for the search.
2	FST Directory	Specify the location on the disc (the base directory) for the files. Using the root directory on the disc as the base, specify a path to anywhere under the <code>content</code> directory.
3	File Filter	Specify a filter to search for files inside the local directory. This filter can contain wildcards.
4	Recurse subdirectories	Check this check box to include the subdirectories inside the local directory as targets for the search.
5	Search	Begins a search based on the settings for parameters 1 through 4 and displays the results in parameters 6 through 8.
6	Use / Do not Use	Check each check box for the listed files you want to use in the File Layout Settings.
7	Local Path	Displays the paths on the local PC to the files found in the search.
8	FST Path	Displays the paths on the disc for the files found in the search.
9	OK/Cancel	Press OK to add and place the files for each check box that is selected to the File Layout Setting . Press Cancel to cancel any update to the File Layout Setting .

3.2.3 Removing File Setting

Here, you can specify a file or range of files to exclude from the application.

To add a file to exclude, start by clicking the **Add Row** button. Next, click the open-file icon at the right edge of the row to open the **Select File** dialog box to add a file or edit that row. You can use a wildcard character (*) when specifying files here, as well.

3.3 Export/Resource File Conversion

Use this page to specify the output directory when exporting the settings from the Application Configuration Tool into an XML file or other format.

3.3.1 Output Directory

The table below shows the two output directories you can specify. You can specify the full path manually, or click the directory icon to the right of the text field, and browse for a directory. You can also specify a relative path, which will be based on the location of the Application Configuration Tool save data file (`appconfig.xml`).

Table 3-4 Output Directory Settings

Item	Description
Code Directory	Specifies the directory containing the application's RPX file. The following files are generated in the <code>code</code> directory. <code>app.xml</code> <code>cos.xml</code> <code>masterinfo.xml</code> <code>(app-name).ddf</code>
Meta Directory	Specifies the directory containing the <code>meta.xml</code> file. Images, sounds, e-manuals, and other resources are also exported <code>meta</code> Directory.

3.3.2 Hash Value

You do not set the hash value. An MD5 hash value will appear after you have used the export option. Values are displayed for the following four files.

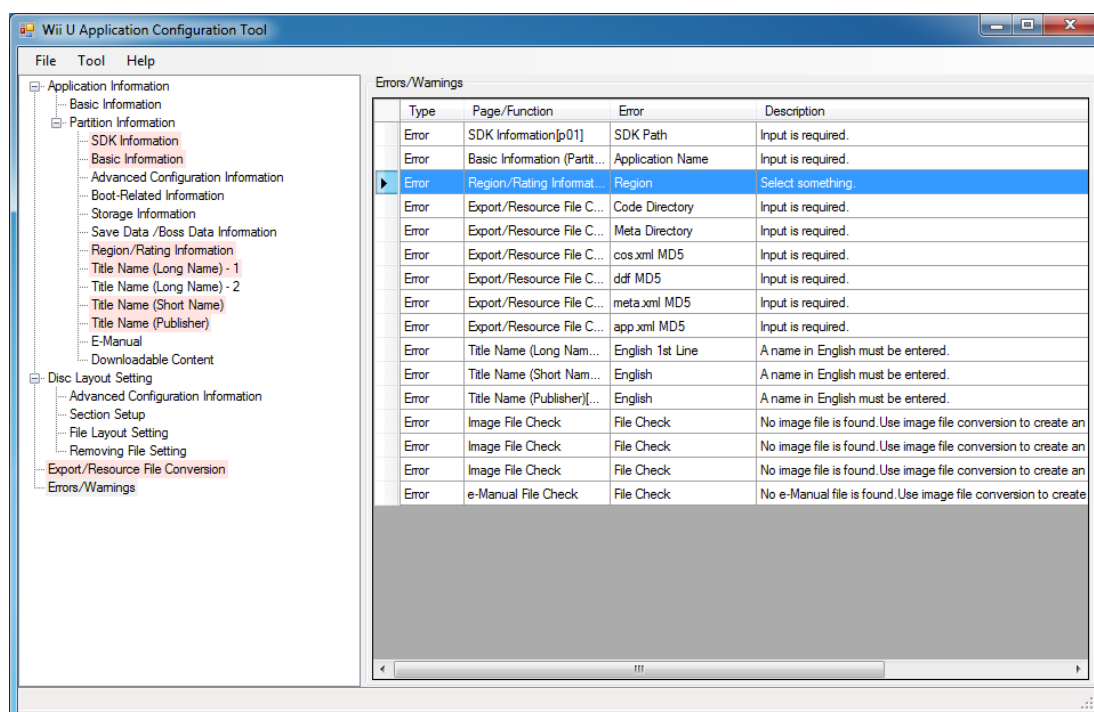
- `app.cml`
- `cos.xml`
- `meta.xml`
- `.ddf` (Disc Layout Settings File)

3.4 Errors/Warnings

The tool jumps to this category when you select **Tool > Validate** from the menu. An error or warning appears if you have not entered a required item, or if the specifications are not met. Double-click (or right-click) an error or warning to jump to the specific item on the specific page that caused the problem. However, the feature to validate image files does not provide a page, so the tool cannot jump in this case. Select **Tool > Convert Image File (P)** from the menu, and select the appropriate conversion.

Update your input and select **Validate** again to refresh the Errors/Warnings category.

Figure 3-4 Errors/Warnings



4 Command Line Mode

This chapter explains how to use the Application Configuration Tool's command line mode. Command line mode uses `appconfigc.exe` rather than `appconfig.exe` and does not show windows.

4.1 Usage

If you want to launch the GUI tool from the command line and enter the settings in the GUI, see Section 4.1.1 Normal Startup (Launching the GUI Tool).

If you have already configured your save data in the GUI and you want to export that data from the command line, see Section 4.1.2 Export Save Data from the GUI.

If you want to create a new save data file and export it from the command line, see Section 4.1.3 Save Data Creation and Export.

4.1.1 Normal Startup (Launching the GUI Tool)

When starting the GUI version of the Application Configuration Tool only, `appconfig.exe` is used rather than `appconfigc.exe`. If the save data for the Application Configuration Tool is specified in the parameters as shown below, the Application Configuration Tool window starts up with the save data loaded. The behavior is the same as when the Application Configuration Tool is started normally and the save data is opened.

```
appconfig.exe [appconfig.xml]
```

4.1.2 Export Save Data from the GUI

To use this feature, you must have already saved a save data file (`appconfig.xml`) using the GUI. If you want to create a new save data file and export it from the command line, without first creating a save data file (`appconfig.xml`) from the GUI, see Section 4.1.3 Save Data Creation and Export.

If the tool is started with the `-export` option as shown below and with save data provided as an argument, the various XML files and disc layout configuration files are exported according to the configuration listed in the save data, in the same way as when selecting **Export** from the **File** menu in the GUI tool. For more information on the command-line options, see Section 4.2 Options.

```
appconfigc.exe -export [options] [appconfig.xml]
```

When the `appconfig.xml` file specifying arguments is not updated, proceed as follows. Apart from not updating `appconfig.xml`, the `-export` process runs in the same way.

```
appconfigc.exe -export2 [options] [appconfig.xml]
```

4.1.3 Save Data Creation and Export

To use this feature, you must first create an `appspecific.xml` file with the required fields. For more information, see Section 4.4 XML File Containing the Input Information (`appspecific.xml`).

If you start the tool with the `-c` option, as shown below, and specify an `appspecific.xml` file containing input information as an argument, the save data is created according to the input information listed in the XML file. At the same time, the various XML files and disc layout configuration files are exported, in the same way as when selecting **Export** from the **File** menu in the GUI tool.

```
appconfigc.exe -c [options] [appspecific.xml]
```

If exporting data for downloadable content, specify the `-aoc` option.

```
appconfigc.exe -c -aoc [options] [appspecific.xml]
```

4.1.4 Conversion Features

If the tool is started with the `-conv_*` option, as shown below, the specified image is converted in the same way as when you select **Tool > Convert Image File** in the GUI tool.

To convert an icon image.

```
appconfigc.exe -conv_icon [options] [in:src-file] [out:dest-dir]
```

To convert a static background image for the startup screen (TV).

```
appconfigc.exe -conv_tv [options] [in:src-file] [out:dest-dir]
```

To convert a static background image for the startup screen (DRC).

```
appconfigc.exe -conv_drc [options] [in:src-file] [out:dest-dir]
```

To convert an e-manual.

```
appconfigc.exe -conv_manual [options] [in:src-file] [out:dest-dir]
```

To convert a boot sound.

```
appconfigc.exe -conv_sound [options] [in:src-file] [in: Loop offset  
value] [in: Sound output number (0=TV, 1=DRC, 2=TV&DRC)] [out:dest-dir]
```

4.1.5 Title Name Check

If the tool is started with the `-check_title` option, as shown below, the length of the title name is checked.

```
appconfigc.exe -check_title [options] [in:title-lang(ja, en, fr, de, it,  
es, zhs, ko, nl, pt, ru, zht)] [in:title-text]
```

4.2 Options

appconfig.exe has the following options.

4.2.1 Common Options

Table 4-1 Common Options Using appconfig.exe

Option	Description
-v	Outputs a detailed log.
-lang=value	Display language (en=English, ja=Japanese).

4.2.2 Export Options

Table 4-2 Export Option Using appconfig.exe

Option	Description
-f	Existing file in the output destination for the export is forcibly overwritten.

4.2.3 Save Data Creation and Export

Table 4-3 Save Data Creation and Export

Option	Description
-aoc	Export for downloadable content
-f	Force overwriting of existing files in the output destination for the export
-o=value	Specify output directory for save data

4.3 Return Values

`appconfig.exe` returns the following values.

Table 4-4 appconfig.exe Return Values

Return Value	Description
2	Finished normally (with errors in input checking)
1	Finished normally (with warnings in input checking)
0	Finished normally
10	Error
11	Excessive arguments
12	File-opening error
30	File already exists
31	Invalid input data (incomplete data or invalid value)
32	Output destination directory does not exist
41	Abnormality in <code>appspecific.xml</code>
42	Framework checking error
43	E-manual processing error
44	AOC mode processing error
60	Resource conversion error
90	Invalid title name

4.4 XML File Containing the Input Information (appspecific.xml)

The XML file that contains the input information (`appspecific.xml`) is an XML representation of the configurable items in the GUI version of the Application Configuration Tool. The command line tool lets you quickly configure the various settings that you previously had to set each time using the GUI version of the tool. Simply enter the values into `appspecific.xml` and pass it as an argument to the command line tool.

For configuration details, see the `man/appspecific_format.xlsx` and `man/appspecific.template.xml` files included in the package.

Default values are used for configuration items not included in the XML file. For example, if the `<Configuration_Code>` element is not included in `appspecific.xml`, the default value of `P` is used.

Revision History

Version	Revision Date	Category	Description
1.12	2015/08/19	Changed	4.1.2 Export Save Data from the GUI Added information about new command.
1.11	2014/05/01	Changed	3.3 Export/Resource File Conversion Added information on relative paths.
1.10	2013/12/19	Changed	1.3 Structure Updated the Application Configuration Tool screenshot
		Added	2.2.4 Generating the appspecific.xml File
1.09	2013/10/01	Changed	2.1 The File Menu Noted that the <code>appconfig.xml</code> file is separate from the <code>appspecific.xml</code> file included with the package. 4.1 Usage Described command-line mode usage. 4.1.1 Normal Startup (Launching the GUI Tool) Provided overview of this feature. 4.1.2 Export Save Data from the GUI Provided overview of this feature. 4.1.3 Save Data Creation and Export Provided overview of this feature.
		Added	2.2.3 Save Data Format Conversion
1.08	2013/07/19	Changed	1.3 Structure Updated the structure overview. 2.1 The File Menu Added that data for retail interactive display (kiosk) demos can be created from Create New. 4.1 Usage Updated description. 4.3 Return Values Updated Table 4-4 <code>appconfig.exe</code> Return Values. 4.4 XML File Containing the Input Information (<code>appspecific.xml</code>) Updated the description.

Version	Revision Date	Category	Description
1.07	2013/05/31	Changed	4 Command Line Mode Revised the description of the newly added command line feature. 4.1.3 Save Data Creation and Export Added feature and its description. 4.3 Return Values Updated the return values in Table 4-1 Common Options using appconfigc.exe 4.4 XML File Containing the Input Information (appspecific.xml) Added description.
1.06	2013/04/11	Changed	4 Command Line Mode Added descriptions of the new command line features.
		Added	2.2.4 Settings
1.05	2013/04/01	Changed	Updated to match changes to the GUI.
	2013/02/01	Changed	General Made comprehensive revisions and deletions so the document only describes how to use the tool. 1 Introduction Added that the reader must refer to the <i>Wii U Master ROM Creation and Submission Procedures</i> for details on items that are configured with the Application Configuration Tool. 2.1 The File Menu Deleted the note stating that the current version of the tool is not guaranteed to be compatible with previous versions. Added explanation of compatibility to the Open (O) menu item. 1.2 Running the Program Renamed section from Installation to Running the Program. Moved similar content to the package Readme file.

Version	Revision Date	Category	Description
1.04	2012/12/03	Changed	3.2.2 Basic Information Added a more detailed description of Configuration Code. 3.2.5 Storage Information Changed item name. 4.1 Advanced Config Information Revised description of Volume Start Address. 4.2 Section Setup Revised description of CODEREL section. 4.2.1 Editing the Allocation File List Added information on section size and a note. 8.5 Configuration Code Revised description.
		Deleted	3.2.5.2 Expansion Device Information
1.03	2012/10/30	Changed	2.1 The File Menu Added information about being unable to open incompatible save data. 3.2.2 SDK Information Removed information on SDK in use. 3.2.2 Basic Information Changed the description for Exit Message Flag. Deleted the item on overlay applications. Changed the descriptions for Join-in Game ID and Join-in Game Mode Mask. Changed the description for the OLV access key. 3.2.4 Boot-related Information Deleted the item on EULA version. 3.2.7.2 Rating Information Added an item for the U.K. 3.2.9 E-Manual Information Deleted information on proprietary formats. 4.1 Advanced Config Information Added information about the Volume Start Address and Volume Size. Add-On Content Deleted information on resolved bugs. 8.2 Folder Structure Added information about the maximum number of subdirectories for add-on content.

Version	Revision Date	Category	Description
		Added	3.2.10 Add-On Content 7 Command Line Mode 8.5 Configuration Code 9.4 Configuration Code
1.02	2012/10/09	Changed	2.2.2 Convert Image File (P) Added that the default sound will be copied during mastering. 3.2.2 Basic Information Changed the description for the OLV access key. 3.2.5.2 Expansion Device Information Deleted the description of criteria for selecting “Not Supported” and added statement to use the default value. 3.2.7.2 Rating Information Added table. 3.2.6 Save Data/Boss Data Information Changed the description in line with changes to the UI. 3.2.8 Title Name Information Described how to enter information for the short name. 3.2.9 E-Manual Information Noted that “Unavailable and “Independent format” are not allowed.
		Added	8 Patches
1.01	2012/09/18	Added	2.2.2 Convert Image File (P) Added information on how to use the default sound.
1.0	2012/09/14	—	Initial version.

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